



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,945	08/09/2006	Dusan Miljkovic	100700.0024US1	2506

24392 7590 09/28/2009

FISH & ASSOCIATES, PC
ROBERT D. FISH
2603 Main Street
Suite 1000
Irvine, CA 92614-6232

EXAMINER

MEHTA, HONG T

ART UNIT	PAPER NUMBER
----------	--------------

1794

MAIL DATE	DELIVERY MODE
-----------	---------------

09/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,945	Applicant(s) MILJKOVIC ET AL.	
	Examiner HONG MEHTA	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is in reply to Request for Continued Examination filed on September 9, 2009. Pending amended claims 1-20 are under examination.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 4, 6-11, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sivetz et al. (Coffee Technology 1979).**

3. **Regarding claim 1, 4, 19 and 20**, Sivetz et al. discloses food product comprising a preparation of whole coffee cherry (pg. 76, line 12), harvested in all stages of ripeness (pg. 76, line 7), including green coffee cherry (pg. 76, line 11) and quick-dried as a whole fruit with mechanical driers or on the sun-drying terrace to make a *natural* coffee, a food product (pg. 76, line 13-14). Sivetz et al. discloses the strip-picked heterogeneous mixture, including green coffee cherry, ripe and soft overripe which vary in proportions as harvest season progress, are made into *natural* coffee (pg. 86, paragraph 6). Sivetz et al. discloses process of drying process (pg. 82, paragraph 3) of the coffee cherry into *natural* coffee wherein producing an excellent quality, clean tasting and full bodied coffee foodstuff upon human consumption. Examiner considers the mentions to tasting attribute are taste evaluations due to oral consumption by humans.

Art Unit: 1794

4. Sivetz et al. discloses natural coffee (pg. 86, paragraph 6) which is processed into soluble coffee. It is well known in the art that soluble coffee with the addition of water is a popular consumed beverage; therefore Examiner considers soluble coffee as food ingredient in a food product, coffee beverage.

5. Furthermore, Examiner considers Sivetz's preparation of whole coffee cherry to exposure to sun-drying terrace and mechanical driers as quick-dried preparation, as defined in Applicant's specification as using heated air exposure to sun and/or ambient air on page 3, lines 24-26.

6. Sivetz et al. discloses the cherries to be sub-ripe coffee cherry in all stages of ripeness, including green color (pg. 76, lines 11) are harvest and to be processed by quick-drying. Sivetz et al. discusses the high moisture content in coffee promotes the growth of microorganism such as molds, fungi and bacteria (pg. 81, para. 2, pg. 127, para. 3; pg. 128). As Applicant disclose "...mycotoxins are typically present in substantial quantities in ripe and overripe coffee cherries, whereas quick-dried sub-ripe coffee cherries or portions thereof, are substantially devoid or have very low content of mycotoxins" (page 3, paragraphs 2 and 3). Sivetz et al. is silent on the quick-dried cherry having a designated myotoxin levels. Examiner considers Sivetz's harvest preparation in all stage of ripeness of coffee cherries (pg. 76, lines 15-16) to include sub-ripe coffee cherries, which includes cherry coffee which has not yet reached the ripe stage.

Art Unit: 1794

7. As Sivetz et al. uses like material in a like manner as claimed, it would therefore be expected that the quick-dried coffee cherry will have the same characteristics claimed, particularly the mycotoxin level, absent a showing otherwise.

8. It is further expected that the composition of Sivetz et al. would fall within the scope of claim 1 and 19, since the claimed end product may encompass a wide range of amount of mycotoxin, aflatoxin, fumonisins and ochratoxins depending on the way in which the product is produced, the source within the coffee cherry and the ratio of the coffee cherry to other ingredients are employed. Due to the natural present of a preservative in coffee cherry, it is further expected that the amount of the same in the product of the Sivetz et al. would provide the same amount of preservative effect. Furthermore, the claims include mycotoxin levels of zero, cited "less than", and no mention of these mycotoxins is mentioned in Sivetz et al.

9. **With respects to claim 4**, Examiner considers the instant cited claim to be whole coffee cherry which Sivetz et al. discloses in claim 1.

10. **With respects to claim 19**, Sivetz et al. discloses cherry fruit is dried to about 12 percent moisture in the whole fruit form after harvesting (page 79, paragraphs 1 and 2) is desirable. Regarding the process limitation to the drying time period as cited in the claim, "[E]ven though the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is

Art Unit: 1794

unpatentable even though the prior product was made by a different process." (*In re Thorpe*, 227 USPQ 964,966).

11. **Regarding claims 6, 7 and 8**, Sivetz et al. discloses the ripe coffee fruit, losing chlorophyll, green to yellow to red as the cherry coffee fruit matures for coffee processing (pg. 74, paragraph 3) and is stripped off in all stages of ripeness (pg. 76, paragraph 2). Sivetz et al. discloses green coffee cherries without red color and blemished area (pg. 76, paragraph 3) to be dried either mechanical drier for "quick drying" or on the sun-drying, solar radiation in ambient air terrace for coffee processing. Sivetz et al. discloses the mixture of cherry coffee may be as high as 15% of green cherry coffee fruit to red cherry coffee fruit at beginning stage of coffee processing harvest (pg. 75).

12. **Regarding claim 9, 10, and 11**, Sivetz et al. discloses a preparation of whole coffee cherry (pg. 76, line 12), harvested in all stages of ripeness (pg. 76, line 7), including green coffee cherry (pg. 76, line 11) and quick-dried as a whole fruit with mechanical driers or on the sun-drying terrace to make a natural coffee, a food product (pg. 76, line 13-14).

13. "[E]ven though the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." (*In re Thorpe*, 227 USPQ 964,966).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. **Claims 1, 4, 6-9, 10-11, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sivetz et al. (Coffee Technology 1979) and Drunen et al. (US 6,572,915 B1), and in further view of Johnson et al. (US 2,526,872), Soucy (US**

Art Unit: 1794

6,202,321), Bucheli et al., Batista et al., Frank, Helferich, Romani et al., Codex Committee on Food Additives and Contaminants (CCFAC) and the United States Food and Drug Administration or USDA.

18. If the levels of toxins in the coffee cherries of Sivetz are not considered to be inherent based upon the ripening stage, the following rejection is made. Sivetz et al. discloses a preparation of whole coffee cherry (pg. 76, line 12), harvested in all stages of ripeness (pg. 76, line 7), including green coffee cherry (pg. 76, line 11) and quick-dried as a whole fruit with mechanical driers or on the sun-drying terrace to make a natural coffee, a food product (pg. 76, line 13-14). Sivetz et al. discloses process of drying process (pg. 82, paragraph 3) of the coffee cherry into *natural* coffee wherein producing an excellent quality, clean tasting and full bodied coffee foodstuff upon human consumption. Additionally, Sivetz et al. discloses natural coffee (pg. 86, paragraph 6) which is processed into soluble coffee. It is well known in the art that soluble coffee with the addition of water is a popular consumed beverage; therefore Examiner considers soluble coffee as food ingredient in a food product, coffee beverage.

19. Sivetz et al. discusses the high moisture content in coffee promotes the growth of microorganism such as molds, fungi and bacteria (pg. 81, para. 2). However, Sivetz et al. does not specifically teach the levels of a mycotoxin level of the cherry is less than 20 ppb for total aflatoxins, less than 10 ppb for total ochratoxins, and less than 5 ppm for total fumonisins. However, Johnson et al. (US 2,526,872), Soucy (US 6,202,321), Bucheli et al., Batista et al., Frank, Helferich, Romani et al., Codex Committee on Food

Art Unit: 1794

Additives and Contaminants (CCFAC) and the United States Food and Drug Administration or USDA, as discuss below emphasizes it is well known in the art of botany, mycology and coffee industry that the levels of mycotoxin are inherently present in coffee cherry and correlates to the its stage of ripeness and maturity of coffee cherry and drying process of coffee cherry.

20. **Firstly**, prior studies showed that *Aspergillus*, *Penicillium* and *Fusarium* are natural coffee contaminants having the potential to produce aflatoxins, ochratoxins, and fumonisins which are detrimental to the quality and safety of the final product. Attention is invited to Batista et al., for instance, wherein Batista clearly teaches, "Like the other crops, coffee cherries and beans are subjected to contamination and consequent colonization by microorganisms during different phases of development, harvesting, transport and storage. Microbial action detrimental to the quality and safety of the final product will depend on environmental conditions as well as crops and product management. Studies on the microbiology of coffee cherries and beans have shown the main toxigenic fungal genera (*Aspergillus*, *Penicillium* and *Fusarium*) are natural coffee contaminants and are present from the field to the warehouse" (pg. 293-294).

21. While the teaching of Frank also teaches, "Lastly, a fresh cherry sample can be manipulated in the laboratory to assess the consequences of the hypothetical circumstances such as a heavy superficial contamination of a particular fungus or removal of the natural external microbial flora" (pg. 6, para. 3). Frank teaches that a harvest aspergilli, such as *A. ochraceus* (and other species with similar physiological

Art Unit: 1794

properties) and OTA production is restricted to a fairly narrow window between A_w values of 0.94 and 0.80. Like Frank, Helferich teaches that aflatoxins are contaminants of agricultural crops, such as coffee. Helferich teaches, "Aflatoxins have become generally accepted to be poisonous and deleterious, and are now widely regulated in foods. In the U.S., the Food and Drug Administration (FDA) regulates feed and food containing aflatoxins at regulatory levels of 20 ppb of AFB for human foods and selected animal feed" (pg. 108, para. 2). Helferich further teaches that ochratoxins are toxins found in coffee; and, that heat treatment at 250°C for 40 minutes provides a 76% reduction of the toxin in white flour (pg. 108-109, under "Ochratoxin A").

22. Furthermore, Romani teaches that international statutory limits for ochratoxin A (OTA) as regulated by Italy are 8 ppb for green coffee and 4 ppb for final product; 10 ppb as regulated by Finland, and 20 ppb as regulated by Greece. While the teaching of Codex Committee on Food Additives and Contaminants (CCFAC), with regard to fumonisins are predominantly directed to its occurrence in cereal grains, CCFAC teaches that *Fusarium* growth and mycotoxin production may continue to grow in agricultural crops if they are not sufficiently dried and that is when the content of small grain is reduced to approximately 15% growth of *Fusarium* species will stop.

Furthermore, the FDA teaches, "The recommended maximum levels fumonisins in corn and corn products intended for human consumption (Table 1) are based on concerns associated with hazards shown primarily by animal studies. However, based on available information on the occurrence of fumonisins, FDA believes that typical fumonisin levels found in corn and corn products intended for human consumption are

Art Unit: 1794

much lower than recommended level. For example, Table 1 indicates levels of 2-4 ppb of fumonisins in corn are acceptable levels for human consumption.

23. **Secondly**, each of Johnson, Mann and Soucy teaches quick-dry methods for reducing the number of toxigenic fungal genera and mycotoxin contaminants in whole coffee cherry or an agricultural crop of economic importance wherein the mycotoxins may occur. For instance, Johnson teaches a method of preventing, eliminating or minimizing fermentation and enzymolysis caused by the action of microorganisms, including yeast, bacteria, and molds on whole coffee cherry by rapidly drying the whole cherry (col. 1, lines 1-24; col. 2, lines 53-54).

24. Next, Mann teaches a method for lowering the alfatoxin level in an agricultural product contaminated with alfatoxin by heat treatment for a period time sufficient until the level of alfatoxin, as measured by chemical assay, ranges from about 3 to about 14 ppb.

25. In another example, Soucy teaches a process for drying whole coffee beans, coca beans (whole coffee cherry), and various grains; and a method of use thereof. Soucy further teaches that drying process is performed in an apparatus for the removal of moisture from bulk moisture content. Finally, Bucheli, demonstrates that reduction of ochratoxin in coffee plant materials of coffee cherry can be achieved by properly drying whole fruit of the *Coffea sp.* Under optimal conditions and within a short period of time after harvesting. Bucheli also teaches that the condition of ochratoxins in coffee cherries is directly related to the coffee cherry maturity. For instance, Bucheli teaches

Art Unit: 1794

that no evidence for the formation of ochratoxin is observed when unripe whole coffee cherry are dried within 1-5 days after harvesting (Table 3 and Table 4).

26. The teachings of Johnson, Soucy and Mann taught that quick-drying of whole coffee cherries or portions thereof or the quick-drying of agricultural crops susceptible to mycotoxin contamination is useful in the drying of the coffee plants materials and provide for a more microbial stabilized dried food product by reducing the killing bacteria and molds present on or in coffee plant parts, as well as inactivate or substantially reducing mycotoxins.

27. One would have reasonably expected that the quick-drying process methods for drying or lowering the water activity or reducing the mycotoxin level of coffee product or an agricultural crop as taught by Johnson, Soucy and Mann would be equally applicable to a whole coffee cherry that was not maturely ripe, "sub-ripe" as taught be successful in the quick-drying of coffee beans or other agricultural products by the references because it would have been no more than matter of routine optimization to provide the result effect variable for the reduction of microbial growth or myotoxin by varying the experimental parameters known to be useful in controlling, preventing or minimizing the growth of mycotoxin-producing *Aspergillus*, *Penicillin* and *Fusarium* or inactivation of mycotoxins produced thereby, as taught by Helferich, Frank, and the CCFAC; and the experimental parameters for the drying of the coffee cherries used in the protocol of sample preparation as taught by Bucheli to assess ochratoxin production in cherries suggested that oven-drying at 70°C and/or freeze-drying of coffee cherries within a minimum time after fruit harvesting greatly reduces the production of ochratoxin and that

Art Unit: 1794

accelerates drying coffee cherries provides for a dried coffee cherry with either low detection or no detection of mycotoxins of varying ranges of ripeness or time of harvest.

28. It would have been obvious to one of ordinary skill in the art to treat the whole coffee cherry used in making natural coffee foodstuff of Sivetz et al. with the methods known in the art to reduce toxins since at the time the invention was made the treatment was well known in the art of botany, mycology and the coffee industry, as discussed above in Johnson et al. (US 2,526,872), Soucy (US 6,202,321), Bucheli et al., Batista et al., Frank, Helferich, Romani et al., Codex Committee on Food Additives and Contaminants (CCFAC) and the United States Food and Drug Administration or USDA.

29. **Claims 2, 3, 5, 12-18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sivetz et al. (Coffee Technology 1979) and Johnson et al. (US 2,526,872), Soucy (US 6,202,321), Bucheli et al., Batista et al., Frank, Helferich, Romani et al., Codex Committee on Food Additives and Contaminants (CCFAC) and the United States Food and Drug Administration (USDA), and further view of Drunen et al. (US 6,572,915 B1).**

30. Sivetz et al. and Johnson et al. (US 2,526,872), Soucy (US 6,202,321), Bucheli et al., Batista et al., Frank, Helferich, Romani et al., Codex Committee on Food Additives and Contaminants (CCFAC) and the United States Food and Drug Administration (USDA) disclosed the claimed invention as discussed above to amended claim 1.

31. Sivetz et al. is silent on the preparation of food product comprising of “comminuted” crushed coffee cherry, extracts and ground fragments in cited claims.

Art Unit: 1794

Drunen et al. teaches a food product prepared from coffee cherry (Abs., col. 52-55) and quick dried (col. 3, lines 7-8). Drunen et al. teach a process by which the antioxidants are extracted (col. 2, lines 18-48) from comminuted coffee cherry.

32. It is further expected that the composition by process of Drunen et al. would fall within the scope of claim 15, 16 and 19, since the claimed end product may encompass a wide range of amount of mycotoxin, aflatoxin, fumonisins and ochratoxins depending on the way in which the product is produced, the source within the coffee cherry and the ratio of the coffee cherry to other ingredients are employed. Due to the natural presence of a preservative in coffee cherry, it is further expected that the amount of the same in the product of the Drunen et al. would provide the same amount of preservative effect. Furthermore, the claims include mycotoxin levels of 0, and no mention of these mycotoxins is mentioned in Drunen et al.

33. **With respect to claims 2 and 3**, Drunin et al. teaches food product wherein the coffee cherry comprises a ground fragment of the coffee cherry (col. 4, Example III, line 46; Example IV, line 61; col. 5, Example V, line 8); extract from ground fragment of coffee cherry (col. 3, lines 34-37, 47-54 and 60-62).

34. **With respect to claims 5**, Drunin et al. teaches food product wherein the coffee cherry comprises extract (col. 3, lines 60-62) of hull (col. 1, lines 18-19); pulp (col. 4, Example I, line 3); bean and mucilage (col. 1, line 59).

35. **With respect to claims 12, 13 and 15**, Drunin et al. teaches food product coffee extract to be incorporated into soluble coffee for a coffee beverage for human consumption. It is universal accepted terminology that the term beverage encompass

Art Unit: 1794

coffee and tea drinks (col. 1, line 14) whereas the term, tea may be generic term to such an infusion of plant material with hot water produced an aqueous extraction of flavors, aromas and extracts in an infused tea beverage.

36. **With respect to claim 14**, Drunin et al. teaches food product is nutritional supplement in liquid or solid form and comprising an extract of the coffee cherry (col. 3, lines 35-44).

37. **With respect to claim 17**, Drunin et al. teaches block of natural extract foodstuff of coffee cherry with polyphenol concentration (col. 3, lines 47-53) to be use in part of a beverage.

38. It would have been obvious to one of ordinary skill in the art to recognize a modification to the teachings of Sivetz et al. and Drunen et al. would be successful because it would address the concern of the international community for the occurrence of mycotoxins in products prepared from coffee cherry intended for human or animal consumption since it is known that aflatoxins, ochratoxins and fumonisins pose risk to the health of humans and animals and would meet the requirements for limited levels of mycotoxins in food crops as regulated by agencies such as FDA. This reasonable expectation of success would motivate the skill artisan to modify the teachings of Sivetz et al. and Drunen et al. to arrive at the instantly claimed composition.

39. It would have been obvious to one of ordinary skill in the art, to employ the preparation of Drunin's extraction of comminuted coffee cherry into Sivetz's modified preparation of quick-dried whole coffee cherry for natural coffee food product as discussed above to amended claim 1. Drunen's method of extraction of comminuted

Art Unit: 1794

coffee cherry and blending the coffee cherry extracts enriches the end food product with beneficial agents present in the processes waste products such as coffee cherries (Abstract). It would have been obvious to one of ordinary skill in the art to combine Drunin's method of extraction of comminuted coffee cherry with sun-drying steps of Johnson, Soucy and Mann and prior studies of mycotoxins levels in Bucheli et al., Batista et al., Frank, Helferich, Romani et al. and regulation of toxicity level of mycotoxins in food crop, such as coffee by CCFAC and USDA into Sivetz's preparation of whole coffee cherry to decrease the levels of mycotoxins for a desired coffee cherry food ingredient.

40. Accordingly, the claimed invention was prima facie obvious to one of ordinary skill in the art at the time of the invention was made, especially in the absence of to the contrary.

Response to Arguments

41. Applicant's arguments filed September 8, 2009 have been fully considered but they are not persuasive. Applicant amended claims 1, 4, and 19.

42. In response to applicant's argument that Sivetz's whole coffee cherries are not quick dried. Examiner disagrees. As discussed above, Sivetz's preparation of whole coffee cherry to exposure to sun-drying terrace and mechanical driers as quick-dried preparation, as defined in Applicant's specification as using heated air exposure to sun and/or ambient air on page 3, lines 24-26, hence Examiner consider Sivetz's preparation of whole coffee cherry to be "quick dried" as claimed in amended claim 1.

Art Unit: 1794

43. In response to applicant's argument that Sivetz's reference is a production of coffee beans, wherein processing step to product coffee bean product, in which food product are neither taught nor suggested. Examiner agrees, that Sivetz's discloses a production, "preparation" for a coffee bean which comprises the preparation of a whole coffee cherry. Sivetz et al. discloses natural coffee (pg. 86, paragraph 6) which is process into soluble coffee. It is well known in the art that soluble coffee with the addition of water is a popular consumed beverage; therefore Examiner considers soluble coffee as food ingredient in a food product, coffee beverage. The rejection to amended claim 1, is to a product claim in which Sivetz's quick dried whole coffee cherry encompass the instant cited amended claim 1.

44. In response to applicant's clarification on preservation in a coffee cherry, Sivetz et al. discusses the high moisture content in coffee promotes the growth of microorganism such as molds, fungi and bacteria (pg. 81, para. 2). It is further expected that the composition of Sivetz et al. containing natural preservatives such as mycotoxins would fall within the scope of claim, since the claimed end product may encompass a wide range of amount of mycotoxin, aflatoxin, fumonisins and ochratoxins are well recognized in the art of botany, mycology and the coffee industry.

45. In response to the levels of mycotoxins in the cited amended claims, the applicant argues Sivetz failed express the amount level of mycotoxins. Examiner disagrees. As noted above, the claims include mycotoxin levels of zero, cited "less than", (claim 1, line 4) and no mention of these mycotoxins is mentioned in Sivetz et al, hence the range has the common endpoint of zero since the claimed range is or "less than" which

Art Unit: 1794

encompasses zero. The lack of mycotoxins levels is considered anticipatory and reads on the claimed range of "less than 5 ppm".

46. In response to applicant's arguments that Sivetz in light of amendments to claims 1 and 19, to rejection on claims 1-20 in views with prior art references discussed above, in combination and alone does not provide to the instantly claimed invention. Examiner disagrees. Sivetz et al. in view of cited prior references disclosed the claim invention. Sivetz et al. discloses a natural coffee as a product-by-process step preparation of quick drying the whole coffee cherry. Sivetz's natural coffee is considered as food ingredient to a food product, coffee beverage as discussed above to amended claim 1. Sivetz et al. meets the limitations of food product as cited in the instant claim. In regards to the specific mycotoxin levels as cited in the instant claims, applicant argues cited references teach mycotoxins levels in coffee bean and not whole coffee cherry. It is noted, applicant claims comminuted coffee cherry in claim 2, 3, 4, 5, 13, 14, 15, 16, 17, 19 and 20 which inherently includes coffee bean in a whole coffee cherry. Additionally, it is clearly stated in claim 4, line 2, and claim 5, line 2, "bean of the coffee cherry". The cited references in combination with Sivetz's quick-dried whole coffee cherry processed into natural coffee, food ingredient that it is reasonable expectation of success would motivate the skill artisan to modify the teachings of Sivetz et al. and cited references, Batisa, Frank, Helferich, Mann, Soucy and Johnson, CCFAC and USDA to arrive at the instantly claimed composition. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re*

Art Unit: 1794

Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

47. In response to applicant's argument, Drunen does not disclose the whole coffee cherry in preparation and notes that Drunen uses coffee cherry. Examiner agrees.

Drunen does not disclose a whole coffee cherry, but Drunen employs comminuted coffee cherry for extraction thereby obtaining a coffee cherry extract to be combined with soluble coffee. It would have been obvious to combine Drunen's coffee cherry extract into Sievtz's natural coffee food ingredient to arrive at the instantly claimed composition. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HONG MEHTA whose telephone number is (571)270-7093. The examiner can normally be reached on Monday thru Thursday, from 7:30 am to 4:30 pm EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer McNeil can be reached on 571-272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Htm

/JENNIFER MCNEIL/
Supervisory Patent Examiner, Art Unit 1794